

REMARKS

Claims 1-19 remain in the application. Claims 1-19 have been rejected.

Applicant respectfully responds to this Office Action.

Claim Rejections under 35 U.S.C. § 102

Claims 1-19 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication 2002/0150065 to Ponnekanti (hereinafter “Ponnekanti”).

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” M.P.E.P. § 2131 (Aug. 2001) (*quoting Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). “The identical invention must be shown in as complete detail as is contained in the . . . claim.” *Id.* (*quoting Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1051, 1053 (Fed. Cir. 1987)). In addition, “the reference must be enabling and describe the applicant’s invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention.” *In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994)

Applicants respectfully submit that claims 1-19 are not anticipated by Ponnekanti for the reasons and explanations set forth below.

With respect to claims 1 Applicant respectfully submits that Ponnekanti does not teach or suggest all of the limitations of amended claim 1. In particular, Ponnekanti does not disclose “a quality message processing unit for generating a quality message and differential indicators based on the measured link quality and for generating a parity check corresponding to the quality message; and a differential analyzer for determining changes in the measured link quality using the quality message and differential indicators”.

Ponnekanti discloses communication systems in four embodiments. The first embodiment discloses the fact that a plurality of transmission paths may exist between a base station and a mobile unit. This embodiment forms a directional transmission beam for each transmission path and transmits a separate transmission signal in each transmission beam. Each of the transmission

signals is encoded differently using a space-time diversity scheme in order to reduce interference between the signals. (Paragraph 0153)

The second embodiment of Ponnekanti uses path diversity in the downlink between the base station and a mobile unit, with different channel coding applied to each transmission signal. The channel coding for each transmission signal is chosen so as to reduce the cross-correlation between the transmission signals, thus reducing interference. (Paragraph 0186)

The third embodiment disclosed by Ponnekanti provides that the transmission signals from a base station to a mobile station are monitored, and if a transmission signal has faded then transmission of that signal is suspended to reduce interference to other transmission signals. The decision whether to suspend transmission of a transmission signal is based on a feedback signal which is sent from the mobile unit to the base station. (Paragraph 0207) Filter outputs are fed to beam quality indicators, which produce a measure of the quality of signals transmitted via the corresponding transmission path. The measures may be based on a history or average of measurements taken over several measurement periods. (Paragraph 0218).

The fourth embodiment of Ponnekanti discloses a time advance that is selectively applied to certain transmission signals so that different transmission signals transmitted via different transmission paths arrive at a mobile unit in approximate time synchronization, thus maintaining the orthogonality between the transmission signals. (Paragraph 0245)

The Examiner states that “Ponnekanti disclosed ‘Communication Systems’ and a method for wireless communication system comprising, a quality measurement unit (items 262, 264 of Fig. 11) for iteratively measuring link quality of a communication link(measured over several measurement periods, para. 0218), a quality message processing unit (item 266 of Fig. 11) for generating a quality message and differential indicators (items 262, 264 of Fig. 11) based on the measured link quality and for generating a parity check (BER, para 0218) corresponding to the quality message (para 0219), and a differential analyzer (item 362 of Fig. 16) for determined changes in the measured quality. (Figs. 10-16, Paragraphs 008-0119, 02075-0224).” Applicant respectfully disagrees with the Examiner’s statement for the reasons set forth below.

Applicant respectfully notes that these citations comprise approximately half the Ponnekanti reference and that the Examiner has provided no detailed citations for the limitation “for determining changes in the measured link quality”. The Applicants point out that the Examiner’s failure to indicate the particular portions of Ponnekanti that he believes disclose the limitation makes it difficult to respond to this portion of the rejection with any specificity. For example, it is not clear which portion of the seven figures and twelve columns of text are believed by the Examiner to disclose “a differential analyzer for determining changes in the measured link quality using the quality message and differential indicators”. The need for such specificity is made clear in both the M.P.E.P. and the patent rules and regulations (M.P.E.P. § 706, “The goal of examination is to clearly articulate any rejection early in the prosecution process so that the Applicant has the opportunity to provide such evidence of patentability and otherwise reply completely at the earliest opportunity.” 37 C.F.R. 1.104(c)(2), “When a reference is complex or shows or describes inventions other than that claimed by Applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.”)

Despite diligent study of the Ponnekanti reference, Applicant finds no disclosure of the limitations “a quality message processing unit for generating a quality message and differential indicators; a differential analyzer for determining changes in the measured link quality using the quality message and differential indicators”. The Examiner cited paragraph 0218. Paragraph 0218 discloses that “Any of the measures could be based on a history or average of measurements taken over several measurement periods (e.g. time slots) to avoid possible instability when two or more of the transmission paths have approximately the same instantaneous quality”. Applicant respectfully submits that this disclosure is diametrically opposed to Applicants’ use of quality messages and differential indicators. Ponnekanti averages quality measurements to avoid instability and thus has no need for differential indicators. Therefore, Applicants respectfully request that the rejection of amended claim 1 be withdrawn.

Claims 2 and 3 are each allowable as depending either directly or indirectly from allowable claim 1.

Claim 4 is allowable for the same reasons given above for claim 1.

Claim 5 is allowable as depending directly from an allowable base claim. In addition, claim 5 is allowable for the following reason. The Examiner cites para. 0219 as disclosing “generating differential indicators at a second frequency” and para. 0216-0224 as disclosing “wherein the second frequency is greater than the first frequency”. Applicants respectfully disagree. As discussed above for amended claim 1, Ponnekanti is silent regarding differential indicators. Despite diligent study of the cited portions of the Ponnekanti reference, Applicants are unable to find any disclosure of “generating differential indicators at a second frequency” and “wherein the second frequency is greater than the first frequency”. Para. 0216-0224 make no mention of frequency at all, nor do they provide for a “second frequency greater than a first frequency”. Therefore, Applicants respectfully request that the rejection of claim 5 be withdrawn.

Claims 6-7 are each allowable as depending either directly or indirectly from allowable claim 4.

Claim 8 is allowable for the same reasons given above for claim 1. In addition, claim 8 is allowable because Ponnekanti does not disclose the limitation “transmitting differential indicators independently of quality messages” as disclosed by Applicants’ claim 8. Because Ponnekanti does not disclose transmitting differential indicators, it also cannot disclose transmitting differential indicators independently from the quality messages. Applicants respectfully request that the rejection of claim 8 be withdrawn.

Claims 9 and 10 are allowable as depending directly from an allowable base claim.

Claim 11 is allowable for the same reasons given above for claim 8.

Claim 12 is allowable for the same reasons given above for claim 1.

Claim 13 is allowable for the same reasons given above for claim 1.

Claim 14 is allowable as depending directly from an allowable base claim.

Claim 18 is allowable for the same reasons given above for claims 1 and 5.

Claim 19 is allowable as depending directly from an allowable base claim.

Claim 15 is allowable for the same reasons given above for claim 1. In addition, claim 15 is allowable because Ponnekanti does not disclose the limitation “determining a transmission rate for transmission of quality messages and differential indicators based on the comparison” as

found in claim 15. Since Ponnekanti does not disclose “differential indicators” and therefore, cannot disclose “transmission of quality messages and differential indicators based on the comparison”. In addition, as noted above for claim 1, Ponnekanti may use historical data or average measurements taken over several measurement periods, which is in direct contrast to the disclosure of Applicants’ claim 15.

Claim 16 is allowable for the same reasons given above for claim 1 and claim 15.

Claim 17 is allowable as depending directly from an allowable base claim.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicant submits that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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